

Using Critical Thinking Skills

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Abstract

Critical thinking development is an essential part of undergraduate education, but are we certain that pre-service teachers can define the concept of CT in order to pursue it later in the classroom? Based on the conviction that CT can be learned, developed and improved. The participants' references which correspond to the meaning of CT as a position conceive this meaning as an attitude that prevents individuals from becoming passive receptors of social happenings. They argue that it makes one distance himself from the masses, develop a personal mentality, cautiously take control of people, facts and circumstances, challenge commonly approved concepts, express his will, develop autonomy and independent thinking and be open to every possibility

Keywords

critical thinking, pedagogy of critical thinking, teacher education, implicative statistics, human ability.

INTRODUCTION

The human ability to respond to the needs constantly arising in modern world is an imperative concerning all parts of the universe. These needs follow not only the acceleration of the pace of change but also the intensification of complexity and interdependence, thus resulting to the need for thinking critically as a major agenda in education across the world. The critical thinking CT movement was generated in the late 1970s and early 1980s in order to help students improve their reasoning about problems encountered in everyday life. According to this aspect, the concept of CT is also linked with an individual able to be cooperative, organized, truthful, conciliatory but not superficial, and devoid of stereotypes and biases. Moreover, a person characterized by this ability is receptive to the presence of any difficulties, thus being able to use overall meta-cognitive processes. In this group of references, the concept of CT is linked with an individual's ability to vocalize and be assertive about his personal opinions, defend his principles and beliefs and think in an individual and not universal way, demonstrating maturity in his decisions. Thus, CT is what leads a person to make personal choices, generally express his personal opinions, take part in discussions, and finally shape his mental personality. According to the group of references, CT is linked to the individual who can make assessments, discern right from wrong, show approval or disapproval, and recognize what is beneficial or not. According to this aspect, CT means that a person can be selective and realize the difference between right and wrong in order to be objective.

MAIN PART

The second category of recorded references has to do with the approach and utilization of knowledge, thus resulting to two subcategories:

The definition of CT on one the hand concerns the formation of a global point of view, and on the other the ability to consider things from different perspectives based on concrete parameters. CT is linked to the acquisition of an all-round knowledge, the process of becoming informed as well as comprehension instead of memorization, all subjected to the formation and output of new knowledge, based on wisdom, education, imagination, and a general observation ability.

According to the references corresponding to this subcategory, CT comprises the combination of theory and practice, problem solving, fact and circumstance interpretation, assimilation and use of new and previous knowledge in various conditions, and finally, a critical implementation of reason. The third category refers to cognitive processes coinciding with reasoning. The participants' references correspond to the concept of CT as a succession of cognitive processes grounded on reasoning: implementation of reason, detection of causes, abstractive ability, ability to analyze, synthesize, compare and thoroughly examine, investigate and detect the essential among details. Moreover, they correspond to the consideration of consequences, implementation of higher thinking processes, orderly placement of thoughts, development and corroboration of thought and, finally, argumentation. In the fourth category the participants' references on CT present a conceptual identification of the term with critical ability. In this group of references CT is reported as equivalent to critical ability, with the notion that critical ability means to have and use one's personal judgement, thus resulting to the ability to judge and criticize. Student teachers describe critical ability as the ability to combine on one hand judgment and thought and on the other judgment and action. In this sense, they note that critical

ability requires the ability to judge before acting. Statistical processing of the participants' answers has produced three diagrams, which outline the relation between social subjects and their references: In the contrary, they diversify themselves from the masses, raise questions, are cautious, think independently and express their thoughts autonomously, while they rid of any stereotypes and prejudices. The hierarchal diagram presents the implicative relationships between the variables in order of significance, as well as the direction of these relationships. We can detect that the participants who believe that CT means the ability to assess are those who express a definite discrimination between right and wrong, the beneficial from the futile, the just from the unjust, and who are ready to answer what is to be approved of and what is not. These participants also attribute the perception of CT as critical ability. The above characteristics seem to imply a person's ability to implement his personal judgement in order to stand critically opposite people, facts, and circumstances, combine judgement with action and in any case never act without first thinking. We should note here that the participants interpret the term CT as critical ability, resulting in a tautology which does not seem to illuminate their conceptions.

However, a further organization of these categories into a structural system is not equivalent to the categorisation inherent in the taxonomical system of Sternberg's model. The participants' conceptions about the notion of CT and the relationships between their characteristics, as were highlighted by the implicative statistical analysis, allow us to consider them as structural elements which form further cognitive patterns on CT born by the participants. First of all, the interpretations of the term are mainly concerned with the notion of meta-cognition, emphasizing on the category of attitudes. The main interrelated concepts are the cognitive processes based on reason and the expression of personal opinions which are related to attitudes. More particularly, the pedagogy of CT can introduce learners to contextual knowing, shift their responses to critical issues from description to depth, display flexible and meta-cognitive thinking, use creativity and face objectivity and subjectivity with respect to their thinking processes. Among the major strategies for encouraging CT, Moon discriminates the following: challenging learners beyond their zone of proximal development, encouraging interaction and risk taking in the classroom, engaging students in thinking and writing procedures, giving examples and "local" definitions of CT, using assessment as quality measurement and feedback, adopting interactive teaching instead of presentations, clarifying the idea of CT in student teachers' own disciplines, and fostering their epistemological development. Reviewing objects, evaluating or developing arguments, engaging in CT about self, reviewing incidents, constructively responding to other's arguments and displaying "a critical habit of engagement with the world" are some of the learners' capacities which need to be deployed if student teachers are to be promoted in their „academic assertiveness. On a second level, the conclusions could be linked to important issues of teaching and learning, such as the implementation of knowledge, the courses included in the curriculum and the creation of conditions which promote the contextualization of CT. Particularly the teaching for critical thinking could have useful implications for diversity in learners' performances: student teachers can have a progress in their epistemological development toward promoting inclusive education and using teaching practices which respond to the needs of cognitively or culturally differentiated classrooms. The clarification of the student teachers' concepts for CT could possibly assist them not only in attaining the promotion of their students' critical abilities, but also in the development

of rethinking their own capabilities. This means that they should be able to think critically about their own practice in an ongoing developmental manner and introduce critical processes into their teaching as professional practitioners –decisions about the content, aims and objectives of instruction, sequencing and pacing of content, pupil interactions with subject matter and evaluation of mastery– thus making steps in tracing a route to the epistemology of practice. Research efforts towards clarification of the concept of CT, as was presented in this paper, seems to be identified as an educational attainment of great significance. Not only does the literature cited and concepts discussed provide a starting point for student teachers to integrate critical thinking skills into instruction, but also research findings can form a basis for restructuring the way traditional curriculum methods and models are used.

CONCLUSION

Moreover, the interaction of students with their environments in order to construct link the notion of CT with social intelligence and the discourse of democracy and freedom: fostering the mind to be free from manipulation, a discourse on CT provides „a language of possibility“ as a philosophical construct that has been of foremost significance to the evolution of critical pedagogy .The limited research sample does not allow generalization and drawing of conclusions. However, we believe that our study could serve as one more discourse on the precise conceptual definition of the term CT among pre-service teachers of Primary Education and for infusing teaching for CT into regular classroom instruction. Further research on the student teachers“ ideas on the topic could create challenges for modeling effective thinking strategies and support particular methods of working with learners in primary school. Empirical evidence shows that persistent and purposeful teaching for promoting higher order thinking among students cultivates CT dispositions and has a beneficial influence on school performance. Pre-service teachers“ willingness to sharpen their own critical thinking capacity could operationalize their definitions of critical thinking, thus justifying their critical reflection as a common characteristic of successful teaching.

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CONFLICT OF INTEREST STATEMENT:

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